if poſſible, two exact obſervations of her *Apparent* place among the *Fixt ſtars* being made, at two places thus diſtant in *Latitude*, and as near as may be under the ſame *Meridian*, by theſe Obſervators concurring at the ſame time, her true and exact diſtance may be hence collected, not onely for that time, but at all other times, by any ſingle Obſervator's viewing her with a *Teleſcope*, and meaſuring exactly her *Apparent* Diameter. It were likewiſe deſirable, that as often as there happens any conſiderable *Eclipſe* of the *Sun*, that this alſo might be obſerved by them, noting therein the exact meaſure of the greateſt Obſcuration compared with the then *Apparent* Diameter of his Disk. For by this means, after the diſtance of the *Moon* hath been exactly found, the diſtance of the *Sun* will eaſily be deduced.

As for the time, fitteſt for making Obſervations of the *Moon*, that will be, when ſhe is about a Quarter or ſomewhat leſs illuminated, becauſe then her light is not ſo bright, but that with a good *Teleſcope* ſhe may be obſerv'd to paſs cloſe by, and ſometimes over ſeveral *Fixt ſtars*; which is about four or five days before or after her Change: Or elſe at any other time, when the *Moon* paſſes near or over ſome of the bigger ſort of *Fixt ſtars*, ſuch as of the firſt or ſecond *Magnitude*; which may be eaſily calculated and foreſeen: Or beſt of all, when there is any *Totall Eclipſe* of the *Moon*; for then the ſmalleſt *Teleſcopical ſtars* may be ſeen cloſe adjoyning to the very body of the *Moon*. Of all which particulars the two Correſpondents are to agree, as ſoon as he, that is to joyn abroad, ſhall be found out; whereupon they are mutually to communicate to each other, what they ſhall have thus obſerved in each place.

Of an Obſervation, not long ſince made in England, *of* Saturn.

This Obſervation was made by Mr. *William Ball*, accompanied

The Royal Society is collaborating with JSTOR to digitize, preserve, and extend access to *Philosophical Transactions (1665-1678)*. www.jstor.org

panied by his brother, Dr. *Ball*, *October* 13. 1665. at ſix of the Clock, at *Mainhead* near *Exeter* in *Devonſhire*, with a very good *Teleſcope* near 38 foot long, and a double Eye-glaſs, as the obſerver himſelf takes notice, adding, that he never ſaw that *Planet* more diſtinct. The obſervation is repreſented by *Figure* 3. concerning which, the Author ſaith in his letter to a friend, as follows; This appear'd to me the preſent figure of *Saturn*, ſomewhat otherwiſe, than I expected, thinking it would have been decreaſing, but I found it full as ever, and a little hollow above and below. Whereupon the Perſon, to whom notice was ſent hereof, examining this ſhape, hath by Letters deſired the worthy Author of the *Syſteme of this Planet*, that he would now attentively conſider the preſent *Figure* of his *Anſes* or *Ring*, to ſee whether the appearance be to him, as in this *Figure*, and conſequently whether he there meets with nothing, that may make him think, that it is not *one* body of a Circular Figure, that embraces his *Diske*, but *two*.

And to the end that other Curious men, in other places might be engaged, to joyn their Obſervations with him, to ſee, whether they can find the like appearance to that, repreſented here, eſpecially ſuch Notches or Hollowneſſes, as at A and B, it was thought fit to inſert here the newly related Account.

A Relation of ſome Mercurial *Obſervations, and their Reſults.*

Modern *Philoſophers*, to avoyd Circumlocutions, call that Inſtrument, wherein a Cylinder of Quickſilver, of between 28. and 31. Inches in Altitude, is kept ſuſpended after the manner of the *Torricellian* Experiment, a *Barometer* or *Baroſcope*, firſt made publick by that Noble Searcher of Nature. Mr. *Boyle*, and imployed by Him and others, to detect all the minut variations in the Preſſure and weight of the Air. For the more

curious

Fig: 1.

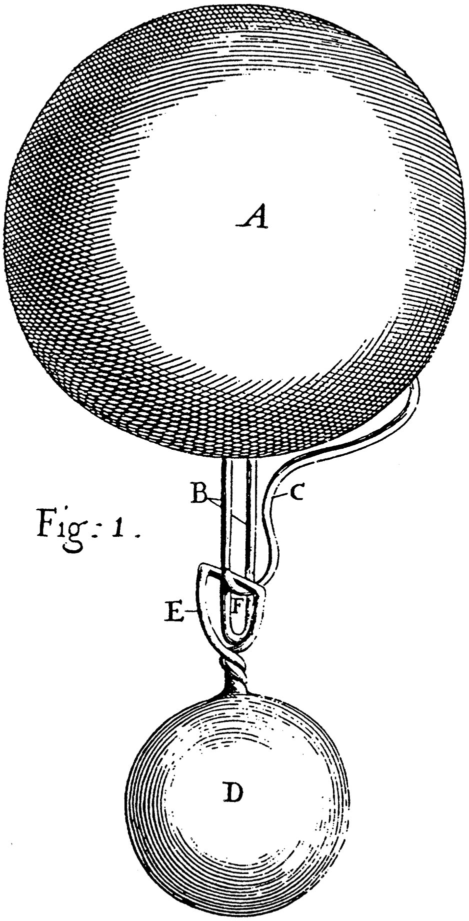

Fig: 2.

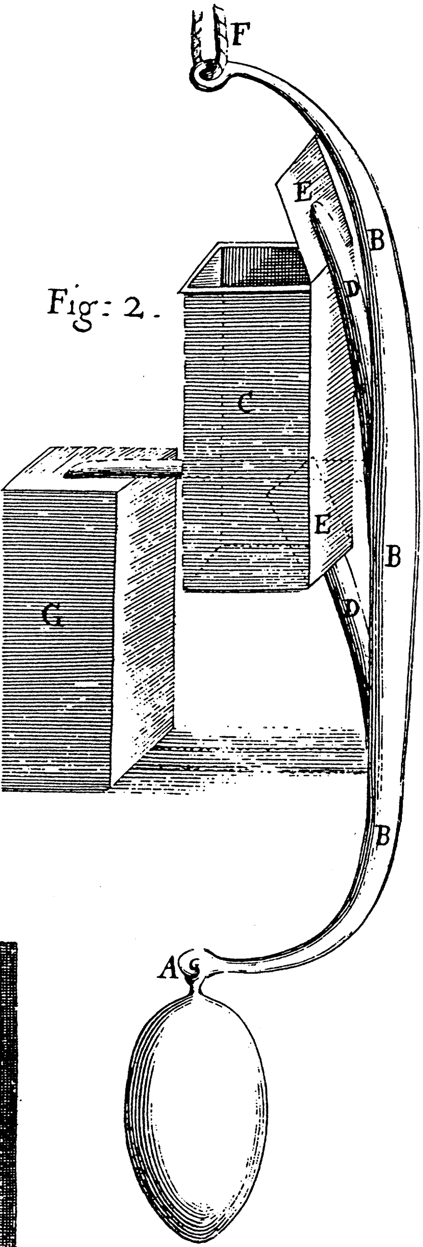

Fig: 3.